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ABSTRACT

Recently collected data appear to warrant advancing some tentative conslusions concerning the short-term effects of violence in television on children: 1) children are exposed to a substantial amount of violent content on television, and they can remember and learn from such exposure; 2) correlational studies have disclosed a regular association between aggressive television and a variety of measures of aggression; and 3) experimental studies preponderantly support the hypothesis that there is a directional, causal link between exposure to television violence and an observer's subsequent aggressive behavior. However, it is important to distinguish between the statement that observation of violence can have such effects and that it will have them for any particular child. It should also be pointed out that every relevant study has at least one methodological flaw on which it might be challenged. (SH)

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Short-term Effects of Televised Aggression on Children's Aggressive Behavior

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Paper presented at symposium, "The Early Window: The Role of Television in Childhood," American Psychological Association Convention, Washington, D. C., September 1971.

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Short-term Effects of Televised Aggression

on Children's Aggressive Behavior

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The question of whether exposure to aggression and violence on television influences children's subsequent aggressive behavior has been an important concern for at least two decades. However, while there has been no dearth of research during this period, theoretical and methodological divisions among investigators have conspired to leave real and important gaps in our knowledge and to overshadow certain meaningful consistencies that are available in the accumulated data.

In view of these considerations, the purpose of this paper is to offer a conceptual overview of some recently collected data which bears on the problem of television and aggression. We will thus attempt to integrate our own experimental work with that of the other participants of this symposium, and to touch upon a few of the remaining studies which have been conducted in the Surgeon General's Television and Social Behavior series. Since conclusions will be suggested, albeit tentatively, it should be emphasized at the outset that they do not necessarily reflect the views of NIMH officials or of other researchers whose work is referenced.

We see the issue of television's effects on children as fitting a general social learning paradigm in which three major issues must be raised: exposure, learning and performance.

Specifically, in the case of aggression on television, one must ask (1) whether children are exposed to aggressive actions and exemplars through the television programs which they regularly watch, (2) whether they learn, remember, and can reproduce at least a certain amount of the aggressive material to which they have been exposed and finally (3) whether their subsequent social behavior is influenced by this exposure and learning.

Are children exposed to aggressive actions and exemplars on television?

To answer this question affirmatively, it is necessary to show that the television fare available to children contains much aggressive material and that they spend a non-trivial amount of time watching such content. Both points appear, to us, to be clearly established.

In a survey recently conducted for NIMH, George Gerbner and his associates (Gerbner, Eleey, & Tedesco, 1970) determined the frequency of protrayals of overt physical violence during prime-time and Saturday morning network programs during the Fall of 1969. The investigators found that, as in earlier years, "violence prevailed in eight out of every ten plays...the rate of violent episodes remained about five per play, or eight per program hour." (1970, Abstract). The violence index (Gerbner's overall measure of the frequency with which violent acts are portrayed) actually rose for one of the networks (NBC) from 1968 to 1969 (p. 14). Further, since our primary concern is with programs which are likely to be of particular interest to children, it is especially important to note that cartoons, the most violent programs in 1967, increased their lead even further in 1969. Gerbner and his associates specifically noted that:

> ...children watching Saturday morning cartoons have the least chance of escaping violence or of avoiding the heaviest--and still growing--saturation of violence in all television. Of all 95 cartoon plays analyzed... only two in 1967 and one each in 1968 and 1969 did not contain violence." (1970, p. 16).

Recent evidence also shows that high violence programs are among young children's favorites. Lyle & Hoffman (1970) for example, found that 24% of the first-grade children whom they studied last year (1970) named cartoons as their favorite type of program, while another 13% selected detective and "hip" adventure stories as their favorites. At the same time, a similar pattern was found in the report prepared for NIMH by Aletha Stein and her associates dealing with preschoolers. The parents of these subjects reported that the youngsters watched cartoons an average of more than 7 hours a week. Even adult violent programs were watched more than one full hour per week by these three- to five-year-old children (p. 61).

Can children learn, remember, and reproduce the aggressive acts which are modeled on television?

An affirmative answer to this question is clearly suggested by so many experimental studies that simply listing them exhaustively would consume our entire time allotment today. This research has repeatedly and reliably shown that children can learn and reproduce a variety of novel physical and verbal aggressive responses through the mere observation of such behavior as it is exhibited through a television console. Network spokesmen have attempted to discount these studies because the learning effects which they demonstrate are displayed in aggressive responses made toward inanimate objects rather

than human victims. Such criticism should not erroneously mask the simple fact that the studies clearly fulfill their intended function of demonstrating learning effects. As Bandura has noted, in life situations aggressive responses are typically taught under just these sorts of apparently innocuous circumstances. He has observed that:

> ...military recruits acquire and perfect combat skills through many hours of combat practice and simulated skirmishes; boxers develop hurtful pummeling abilities by using punching bags...huntsmen acquire the basic rudiments of hunting by shooting at inanimate targets...indeed, if aggressive responses were taught only when individuals were hostilely aroused and entertained injurious designs, many of the tutors and learners would probably be maimed during the acquisition phase (Bandura, 1969, p. 378).

Can exposure to, and learning from, aggressive television influence children's social behavior?

While learning effects may be explored satisfactorily within a simple experimental framework, the influence of observing violence on a youngster's subsequent aggressive performance may only be adduced convincingly from a network of correlational and controlled experimental approaches. New information has recently become available from both types of research.

Correlational data

Correlational studies conducted last year for NIMH by a number of different investigator teams have demonstrated a reliable association between exposure to aggressive television and various measures of aggression among children and adolescents. Only brief excerpts from their conclusions can be given here.

McIntyre & Teevan (1971) studying adolescents in Maryland, found a degree of association between preferences for aggressive programs and both aggressive attitudes and deviancy. For example, they have reported that adolescents whose favorite programs are relatively more violent are also more likely to approve of such violent actions as a teenage boy punching or knifing another youngster.

Dominick & Greenberg, working with fourth, fifth, and sixth grade boys and girls in Michigan, found reliable associations which led them to conclude that exposure to aggressive television fare makes a "...consistent independent contribution to the child's notions about violence. The greater the level of exposure to TV violence, the more the child was willing to use violence, to suggest it as a solution to conflict, and to perceive it as effective." (1971, p. 11).

Working with boys and girls of both junior and senior high school age in Wisconsin, McLeod, Atkin & Chaffee found that: "...the more the child watches violent television fare, the more aggressive he is likely to be as measured by a variety of self-report measures." (p. 22). As Dr. Chaffee has indicated today, partialling out total viewing time, socioeconomic status, and school performance does not alter his basic finding. The result also survives a variety of analyses which might provide competing explanations vis-a-vis the hypothesis that TV violence is causally linked to aggression.

Working in a rural county of the State of New York, Lefkowitz, Eron & Walder (1970) recently completed a ten-year longitudinal study of over 400 youngsters at grades 3, 8, and at age 19. These investigators related exposure to television violence and aggressive behavior.

They found, but only for boys, that "...a substantial component of aggression at all three grade levels... can be predicted better by the amount of TV violence which the child watches in the third grade than by any other causal variable measure..." (p. 34).

These correlational studies do not firmly show causation; they should, however, increase our confidence in experimental studies if a consistent total pattern emerges. And it does.

Experimental data

A comprehensive annotated bibliography of such experimental studies through 1969 has been published recently by Atkin, Murray, and Nayman (1970) under the auspices of NIMH. In it, Strauss and Poulos (1971) have identified eighteen experimental studies from eight different research teams which met the following criteria:

1. One or more groups of subjects were exposed to films or television programs displaying violence or aggression.

2. One or more groups of subjects were exposed to films or television sequences with no aggressive content.

3. At least one dependent variable was examined which might tap subjects' subsequent willingness to aggress.

4. A statistically significant result was obtained in the experiment.

Of these investigations, 16 (or 88%) accounting for seven of the eight research teams, present evidence which supports the hypothesis that viewing aggression can instigate subsequent aggression among observers.

Since 1969, three experimental studies conducted specifically for NIMH have provided further support for this same conclusion. In one of these investigations, Leifer and Roberts (1970), working in northern California, exposed a large number of children and adolescents ranging from kindergarteners to 12th graders, to television programs which differed in the amount of violent content displayed. The programs were taken directly from the air, without editing. The children were first tested on their recall and understanding of the motives and consequences of the violent acts which they had seen and were then tested on a specially designed response hierarchy of their willingness to aggress. The child was presented with a series of real-life situations ("You're standing in line for a drink of water. A kid comes along and just pushes you out of line. What do you do?") and asked to choose between a pair of alternative responses. One of the alternatives was typically aggressive ("Push them"), while the other was not ("Go away"). The investigators found that the more violent programs reliably produced higher levels of aggressive responding than the less violent programs. It is of further interest that, in this experiment, understanding of the motivations for, and consequences of, violence in a program did not account to a significant degree for the aggression scores. That is, it appears that, for unedited programs, the instigating effect of viewing violence is not reduced by an understanding of the motives and consequences which surround it, at least for this measure and these age groups. In an interim report of their results, Leifer and Roberts noted:

> Whatever analysis was performed, the amount of violence in the program affected the amount of aggression subsequently chosen. Nothing else about the program, the context within which violence was presented, seemed to influence subsequent aggression. Furthermore, our measures of understanding of the cues hypothesized to control aggression, motivations, and consequences, did not relate at all to aggression choices. (pp. 35-36).

In another study, which Dr. Baron and I conducted for NIMH (Liebert & Baron, 1971) the effects of exposure to short excerpts from either a commercially aired television program, "The Untouchables" or a nonaggressive but highly active sports sequence of the same length were compared. The participants were children of two nonoverlapping age groups, 5-6 and 8-9, whose backgrounds were widely varied in terms of ethnic and economic characteristics. After exposure to one of these programs, all children were given a series of 20 opportunities to either help or hurt a peer who was ostensibly playing in another room. The apparatus used was a modification of the one developed by Mallick and McCandless (1966) for use with relatively young children. Despite the brevity of the aggressive sequences, the absence of a strong prior instigation to aggression, and the clear availability of an alternative helping response, children who were exposed to "The Untouchables" sequence made hurting responses of significantly longer duration than those exposed to the highly active but nonaggressive control program. In the report it was noted that:

> ...the group means [for the <u>average duration</u> of the subject's aggressive responses] did not overlap; the <u>lowest</u> individual cell mean among those who observed the

> aggressive program was higher than the highest mean among those groups who observed the nonaggressive program...the instructions given to all children emphasized that a brief depression of the Hurt button would cause only minimal distress to the other child, while longer depressions would cause increasingly greater discomfort. This fact, coupled with the finding that the overall average duration of such responses was more than 75% longer in the aggressive program group than in the control group, seems to suggest clearly that the primary effect of exposure to the aggressive program was that of reducing subjects' restraints against inflicting severe discomfort on the ostensible peer victim... With the exception of the older girls, this effect was not paralleled by an increment in the corresponding measures of helping; thus it cannot be attributed to simple arousal effects (1970, p. 14).

In a third experimental study conducted for NIMH, Stein, Friedrich & Vondracek (1971) employed the experimental method in a relatively naturalistic situation in order to determine some of the cumulative or longer-range effects of observing television upon children. The subjects were 97 children, both boys and girls, between three and one-half and five and one-half years of age, who were systematically exposed to television programs of differing content during the course of the participation in a summer nursery school. This carefully designed experiment involved an initial measurement period in which the free play of children in the nursery school was observed and rated according to a variety of categories, a four-week

experimental period in which children were systematically exposed either to aggressive cartoons, neutral television programs, or prosocial programming such as episodes from the series "Misterogers Neighborhood."

The investigators found that children who were initially in the upper half of the sample in interpersonal aggression subsequently showed greater interpersonal aggression if they were exposed to the aggressive programming. than if they were exposed to either the neutral or prosocial programming. The investigators state:

> These results suggest that children who initially are high in aggression respond to aggressive television programs with higher levels of aggression than they would under neutral conditions. These effects occurred in naturalistic behavior which was removed both in time and in environmental setting from the viewing experience. They occurred with a small amount of exposure, particularly in relation to the amount the children received at home, and endured during the post-viewing period (1971, pp. 79-81).

Tentative conclusions

The findings briefly reviewed here, in conjunction with the considerable body of earlier research, appear to warrant formally advancing some tentative conclusions into the arena of public debate. Specifically, we feel that the following summary is suggested by the data in aggregate.

1) It has been shown convincingly that children are exposed to a substantial amount of violent content on television, and that they can remember and learn from such exposure.

2) Correlational studies have disclosed a regular association between aggressive television viewing and a variety of measures of aggression, employing impressively broad samples in terms of range of economic background and geographic and family characteristics.

3) Experimental studies preponderantly support the hypothesis that there is a directional, causal link between exposure to TV violence and an observer's subsequent aggressive behavior.

An essential qualification in the interpretation of these summary statements should be pointed out. As Berkowitz (1970) has recently noted, it is important to distinguish between the statement that observation of violence <u>can</u> have such effects and that it <u>will</u> have them for any particular child or program since "...a good many situational and personal factors influence the relationship between witnessed violence and the likelihood of aggressive actions by observers..." (p. 2).

Additionally, it is, and will continue to be, the case that every relevant study has some methodological flaws on which it might be challenged. However, each of these flaws tends to be unique rather than shared by all, or even many of the relevant investigations. Thus, the overall pattern of results among them may be soundly defended against charges of internal invalidity.

Further, it has been repeatedly shown in experimental studies of obserbing aggression in film and television formats that, under some circumstances, disinhibitory effects can occur in samples

covering the age gamut from preschool children to mature adults. At almost every age range, such findings have been found by at least two or more independent research teams. These results generally mesh with the now numerous correlational studies which are able to approach more closely the situations in which viewing, and aggression, occur naturalistically. Studies failing to produce statistically reliable results are a distinct minority and those suggesting that seeing aggression reduces aggression are rare enough to be called anomalous.

If a probabilistic view of the accumulated evidence is taken, as it typically is in the health sciences, the weight of the evidence to date would seem to represent real progress in determining the effects of violence on television upon youngsters. Specifically, there is more than a trivial basis for a "best guess" conclusion which is central to the major question: At least under some circumstances, repeated exposure to televised aggression can lead children to accept what they have seen as a partial guide for their own actions. As a result, the present entertainment offerings of the television medium may be contributing, in some measure, to the aggressive behavior of many normal children. Such an effect has now been shown in a wide variety of situations.

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